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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/679,697	10/07/2003	Choong Un Lee	054358-5017	3567

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EXAMINER	
DUONG, THOI V	

ART UNIT	PAPER NUMBER
2871	

DATE MAILED: 03/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/679,697	LEE ET AL.	
	Examiner	Art Unit	
	Thoi V. Duong	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *03* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 January 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-13,16 and 17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-13,16 and 17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on December 08, 2005 has been entered.

Accordingly, claims 1, 3, 5 and 8 were amended, claims 2, 14 and 15 were cancelled, and new claims 16 and 17 were added. Currently, claims 1, 3-13, 16 and 17 are pending in this application.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 3-13, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kodera et al. (Kodera, USPN 6,195,149 B1) in view of Hadoka et al. (Hadoka, JP 09-325328) and Shiraishi (USPN 6,864,947 B2).

Re claims 1 and 8, as shown in Figs. 28-31 (Fig. 30 is annotated), Kodera discloses a method of fabricating a liquid crystal display panel, comprising:

forming a plurality of upper liquid crystal display panel units (in sealing-in areas 117) on a first mother substrate 101 and a plurality of liquid crystal display panel units (in sealing-in areas 117) on a second mother substrate 104 (col. 1, lines 22-26);

forming sealant patterns 106 on at least one of the mother substrates 101 and 104 (col. 1, lines 26-28);

attaching the first and second mother substrates 101 and 104 to each other to bond the upper liquid crystal display units with associated ones of the lower liquid crystal display panel units to form at least first and second liquid crystal display panel units 117 (Fig. 30 and col. 1, lines 28-32);

forming at least (first) cutting lines 108 and 118 on each of the first and second mother substrates 101 and 104 the (first) cutting lines 108 and 118 corresponding to a boundary of the first and second liquid crystal display panel units 117 (col. 1, lines 36-60); and

separating the first and second liquid crystal display panel units into individual liquid crystal display panels 119 (Fig. 31 and col. 1, lines 60-63).

Re claim 16, as shown in Figs. 28-31 (Fig. 30 is annotated), Kodera discloses a method of fabricating a liquid crystal display panel, comprising:

forming a plurality of upper liquid crystal display panel units (in sealing-in areas 117) on a first mother substrate 101 and a plurality of lower liquid crystal display panel units (in sealing-in areas 117) on a second mother substrate 104 (col. 1, lines 22-26);

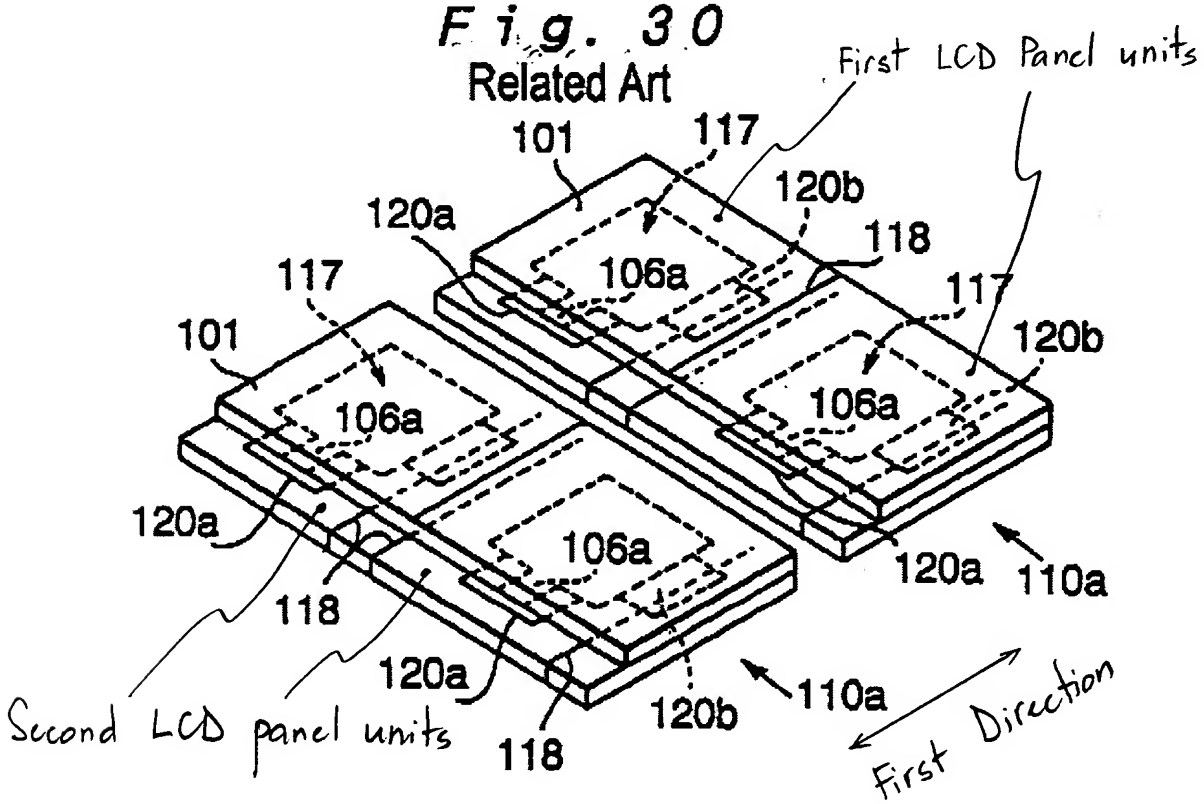
forming sealant patterns 106 extending in a first direction on at least one of the mother substrates 101 and 104 (col. 1, lines 26-28);

attaching the first and second mother substrates 101 and 104 to each other to bond the upper liquid crystal display units with associated ones of the lower liquid crystal display panel units to form at least first and second liquid crystal display panel units 117 (Fig. 30 and col. 1, lines 28-32); and

forming a first set of cutting lines 118 substantially in the first direction on each of the first and second substrates, the first set of cutting lines spanning the entire width of the first and second substrates and corresponding to a boundary of the first liquid crystal display panel unit 117 (Fig. 30).

It is noted that, as shown in Figs. 28 and 30, the cutting lines 108 and 118 create a plurality of dummy glass substrates between the liquid crystal display panel units 117.

Fig. 30
Related Art



However, as recited in claims 1, 8, 16 and 17, Kodera does not disclose that the liquid crystal display panel units having at least two different sizes, wherein first liquid crystal display panel unit is larger than the second crystal display panel unit; and

second cutting lines are formed substantially in the first direction on each of the first and second mother substrates, the second cutting lines spanning only a portion of the first and second substrates and corresponding to a boundary of the second liquid crystal panel unit,

wherein the first cutting lines extend over at least one sealant pattern; and

wherein the first and second mother substrates include a plurality of dummy glass substrates (or remnants of the separated mother substrates) including main dummy glass substrates and second dummy glass substrates divided by the first cutting lines, and at least one of the sealant patterns under the first cutting lines binds the main dummy glass substrates and secondary dummy glass substrates together during the separating step.

At first, as shown in Fig. 1 (annotated), Hakoda discloses a method of fabricating liquid crystal display panels comprising forming first liquid display panel units 3 and second liquid crystal display panel units 4 on a mother substrate 1, wherein the first liquid crystal display panel unit 3 is larger than the second crystal display panel unit 4 (Abstract and Detail Description, paragraphs 7-9).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of fabricating liquid crystal display panels of Kodera with the teaching of Hakoda by forming liquid crystal display panel

units having at least two different sizes on mother substrates in order to reduce production cost (Abstract). It is also obvious that second cutting lines are definitely required to separate the second liquid crystal display panel units into four individual TFT panels 4; accordingly, the second cutting lines are spanning only a portion of the first and second mother substrates and corresponding to a boundary of the second liquid crystal display units.

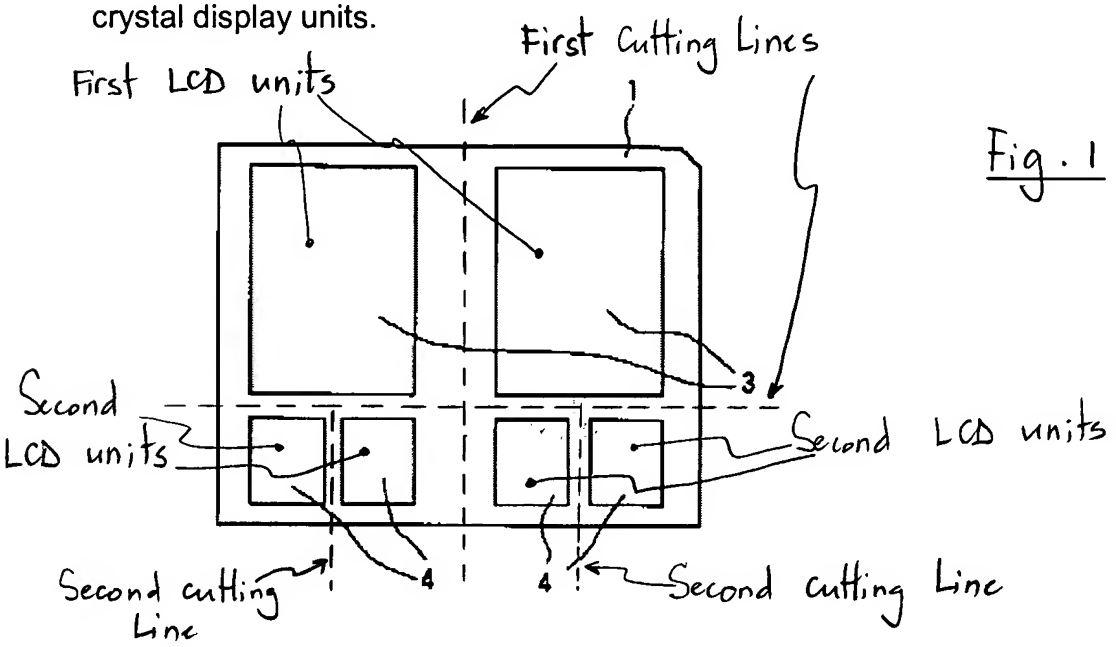


Fig. 1

Further, as shown in Figs. 7A, 7B, 8A and 8B (Fig. 8B is annotated), Shiraishi discloses a method of fabricating a liquid crystal display panel, comprising:

forming cutting lines (scribe cracks) A-L on each adhesive surface of the first mother substrate and second mother substrates 11 and 12 (col. 8, lines 45-51), the cutting lines A-L corresponding to a boundary of the liquid crystal display panel unit 20a (Figs. 7A and 7B); note that the cutting lines A-D, G-J are formed substantially in the first direction (vertical direction in Fig. 8A) and spanned the entire width of the first and second mother substrates 11 and 12; and

separating the liquid display panel units into individual liquid crystal display panels 20a,

wherein the cutting lines A-F extend over sealant pattern 2 (Figs. 8A and 8B); and

wherein, as shown in the annotated Fig. 8B, the first and second mother substrates 11 and 12 include a plurality of dummy glass substrates including main dummy glass substrates and second dummy glass substrates and at least one of the sealant patterns 21 (dummy patterns) under the cutting lines A-F binds the main dummy glass substrates and secondary dummy glass substrates together during the separating step. Shiraishi discloses that the sealant pattern 21 is provided in order to prevent the bias of the stress when cutting the substrates (col. 10, lines 50-52).

FIG. 8B

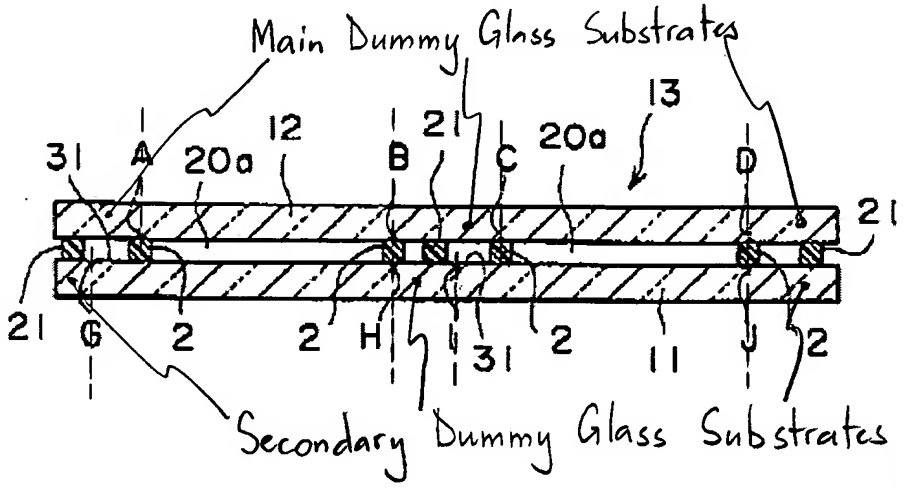


Fig. 8B also shows that the main dummy glass substrate and the secondary dummy glass substrates are formed between the liquid crystal display panel units 20a.

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the method of fabricating the liquid crystal display panels of Kodera with the teaching of Shiraishi by extending the cutting lines over the sealant pattern in order to obtain an appropriate cutting surface without receiving an influence of the bias of the stress due to the sealant pattern as well as to enlarge the liquid crystal display areas (col. 5, lines 21-24 and col. 11, lines 3-20).

Re claims 3 and 10, Shiraishi discloses that a distance between a terminal face of the sealant 2 and a terminal face of one of the substrates 11 and 12 is substantially equal to or less than 0.5 mm (see also Fig. 3 and col. 6, lines 17-25). Accordingly, this corresponds to the width of the main dummy glass substrates shown in the annotated Fig. 8B. Since the secondary dummy glass substrates is equal to or smaller than the main dummy glass substrates as shown in Fig. 8B, the width of the secondary dummy glass substrates is also substantially equal to or less than 0.5 mm, which meets a width of less than 3 mm of claims 3 and 10.

Re claim 4, Shiraishi discloses that the sealant patterns 21 are formed on non-display regions of the liquid crystal display panels 20a as shown in Fig. 8A.

Re claim 5, Shiraishi discloses that the sealant pattern 21 is positioned on both the main dummy glass substrates and the second dummy glass substrates as shown in Fig. 8B.

Re claims 6 and 11, Fig. 8B of Shiraishi shows that sizes of the upper liquid crystal display panel units on the first mother substrate 12 and the lower liquid crystal display panel units on the second mother substrate 11 facing correspondingly at into each other are substantially the same.

Re claims 9 and 13, as shown in Fig. 10, the method of Shiraishi further comprises injecting liquid crystals into the separated liquid crystal panel units (col. 11, lines 21-28).

Re claims 7 and 12, as shown in Fig.11, Kodera discloses every limitations comprising the second substrates 4 having a plurality of thin film transistors and a plurality of pixel electrodes 7, and the first substrates 1 having a common electrode 2 (col. 3, lines 38-52 and col. 8, lines 29-64) except for a plurality of color filters formed on the first substrates. However, it is well known in the art that a plurality of color filters can be formed on the first substrates in order to realize a color display as disclosed by Shiraishi (col. 1, lines 21-26).

Response to Arguments

4. Applicant's arguments filed December 08, 2005 have been fully considered but they are not persuasive.

Applicant argued that in Fig. 8A of Shiraishi, the seal under the cutting line F (which is horizontal) cannot bind the vertical portion (i.e., portion between lines A and G) to the horizontal portion during the separating process; therefore, there is no seal as shown in Fig. 8A that binds the horizontal portion construed as "the main dummy glass substrate" to the vertical portion construed as the "secondary dummy glass substrate."

The Examiner disagrees with Applicant's remarks since Fig. 8B (annotated) of Shiraishi clearly shows that the remnants of the separated mother substrates include main dummy glass substrates and secondary glass substrates divided by the first cutting lines A-D, G-J and a sealant pattern 21 is formed under the cutting lines A-D that binds the main dummy glass substrates and secondary glass substrates together during the separating step. Thus, in Shiraishi's reference, there is a disclosure of a sealant pattern located underneath the first cutting lines between the main dummy glass substrates and the secondary dummy glass substrates.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thoi V. Duong whose telephone number is (571) 272-2292. The examiner can normally be reached on Monday-Friday from 8:30 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim, can be reached at (571) 272-2293.

Thoi V. Duong 

03/15/2006